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EAGER SENTINELS: The PCR-free Biosensor for a Fast, Simple, and Sensitive Detection of RNA

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Data Management Plan

PRODUCTS OF RESEARCH.

The proposed project will produce physical and electronic data. The physical data will be generated and stored daily in laboratory notebooks. The data will explicitly describe the experimental procedure and contain observations and results so that the activity can be reproduced independently based on this information. Each activity will be labeled according to the format "Initials_YYYYMMDD". This label will be consistent with the folder containing the electronic data and present in progress reports next to the related text, graph, or table.

Electronic data will include original instrument data files, data converted to ASCII format and figures, tables, and text. All electronic data will be saved in the folder named according to the format "Initials_YYYYMMDD" that will link them to the laboratory notebook. In addition, weekly and half-year progress reports will be prepared as Microsoft PowerPoint presentations, saved in PPT and PDF formats and stored using Box cloud service provided by USU. This will allow the PI to have immediate access to the results.

DATA FORMATS AND STANDARDS

The generated electronic data will be saved in the following formats: original instrument data format, ASCII format, Microsoft Excel, or OriginLab formats. The biweekly and half-year progress reports will be stored in Microsoft PowerPoint and Adobe PDF formats to allow easier sharing. The manuscripts will be prepared in Microsoft Word, and the graphics will be prepared mainly as JPG, Adobe Illustrator, or other formats according to the requirements of the corresponding journal.

DISSEMINATION, ACCESS AND SHARING OF DATA

The project data will be disseminated by publishing in peer-review journals and as contributions at conferences. In addition, the information about the publications, such as the full reference, weblink to both manuscript and supporting information, and a short description, will be shared on the group website that will be created by the end of the year 2020 on the basis of the current webpage www.artavazd.badalyan.weebly.com. PI Badalyan will maintain the webpage for at least ten years.

Full data sets from this work will be available through email request after publication. Upon request, PI will provide access to download the data. Access to the data will be granted after the interested parties sign a nondisclosure agreement or agree that any profits which may result from using the data will be shared with the Badalyan group.

The computers will be protected by up-to-date antivirus software and firewall technology to prevent unauthorized access or tampering. Box cloud service ensures data integrity, includes version control, and is password controlled and encrypted.

RE-USE, RE-DISTRIBUTION AND PRODUCTION OF DERIVATIVES

The data required for the reproduction of the published work will be available in general. However, in the case of possible issues of privacy, confidentiality, security, or intellectual property, access to the data will be granted after the interested parties sign a nondisclosure agreement or agree that any profits which may result from using the data will be shared with the Badalyan group. The data shared on the group website will contain general, not sensitive information.

ARCHIVING OF DATA

PI Badalyan will obtain copies of all electronic data such as original and processed data, progress reports, conference contributions, published articles, and save this information on two sets of external hard drives stored in different locations for a minimum 5 years to avoid the risk of losing data. Also, the progress reports and data required for publishing articles will be stored using Box cloud service. At the end of the project, all hard-copy laboratory notebooks will be stored by PI Badalyan. Both index of hard-copy laboratory notebooks and half-year progress reports will provide easy access to the archived data.

All research team members will be trained to follow data management policies.